

# CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

WALTER M. DICKIE, M.D., Director

## Weekly Bulletin



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EDITOR

## *Carbon Monoxide Poisoning Takes Many Lives*

A marked increase in the numbers of deaths from carbon monoxide poisoning comes with the approach of colder weather. This increase is coincidental with the increased use of gas-heating equipment and the more extended custom of running motors in closed garages. The average car in a closed garage of average size can, within a few minutes, give off a sufficient quantity of carbon monoxide in the exhaust gases to kill a human being. No motor should be permitted to run in any garage unless the garage doors are open wide. It sometimes happens, also, that exhaust gases leak into tightly closed cars, and several fatal cases of carbon monoxide poisoning have occurred among individuals who were riding in the rear of a closed car into which the exhaust fumes gained entrance. The victim generally has no warning that he is exposed to this disastrous gas until it has affected him to so great an extent that he is unable to act. As compared with other poisonous gases, carbon monoxide is colorless, tasteless and practically odorless.

A number of deaths also occur during the winter months due to asphyxiation from the ordinary household gas used for heating or illuminating purposes. Among the common causes for such deaths are the following:

1. Gas stoves or water heaters that are not connected to a chimney flue or other vent.
2. Faulty connections to gas stoves and gas plates.
3. Leaky rubber hose and rubber connectors to gas heaters, which permit the escape of gas.
4. Loose keys and valves which permit leakage of gas.

5. Location of valves in by-passes at, or near, the floor line where they may be kicked open accidentally or turned open in the process of moving furniture.

6. Placing large containers, like wash boilers or kettles, upon the tops of gas ranges with the flame turned too high.

7. The boiling over of the contents of shallow cooking utensils, thereby extinguishing the blaze without the knowledge of the occupants of the room.

8. Gas flames turned so low that they are easily extinguished by a gust of wind.

9. Gas flames turned so high that unburned gas accumulates in the room.

Modern appliances, such as gas ranges with closed tops, if properly connected, provide little or no hazard from poisoning by carbon monoxid. In fact, all gas appliances, including ranges, water heaters and gas heating devices, will give satisfactory results, free from any hazard whatsoever, if they are installed properly and operated properly. The use of gas appliances is as essential as is the use of automobiles. Careless operation of either gas appliances or automobiles may result in poisoning from this disastrous gas.

Dr. Robert T. Legge, Professor of Hygiene in the University of California, has written the following relative to carbon monoxid poisoning:

"The very general use of automobiles and other gasoline-burning engines whose exhausts contain 7 per cent of carbon monoxid, and the consequent vitiation of atmosphere in garages, traffic tunnels, and



congested thoroughfares, has given public health and industrial hygienists much concern. A recent average of 141 tests made by United States Public Health chemists in city streets at peak hours of traffic showed a contamination of 0.8 in 10,000 parts of air, while in 102 tests made in twenty-seven garages taken in fourteen different cities the average carbon monoxid content was 2.1 parts in 10,000. From an industrial hygienist's view, the amount of carbon monoxid should not be more than one part in 10,000 parts of air.

"One of the greatest dangers to life is encountered in warming up an engine in the small, closed garage; a hazardous act that should be given universal publicity. Coroner reports annually record the increased fatalities as a result of idling a running motor in a garage. It has been estimated that a motor will discharge two feet of carbon monoxid every minute, so that in twenty minutes the atmosphere would be concentrated enough to kill a dog by asphyxiation.

"The symptoms of carbon monoxid may be divided into two stages. In the first stage there is a feeling of tightness across the forehead, dizziness, frontal and basal headache, smarting of the eyes, lack of proper muscular coordination, nausea or vomiting with increased pulse and respiration. In concentrated atmospheres, the victim, due to rapid poisoning, may develop complete loss of sensation and motion with diminution or cessation of the heart pulsations. Exposure of a pregnant woman to carbon monoxid may cause the death of her child, with subsequent miscarriage.

"The second stage is characterized by loss of muscular control, coma with intermittent convulsions, shallow and irregular breathing, and finally cessation of respiration. Recovery from a severe gassing may be followed by pneumonia, blindness, neuroses, muscular irritability, and mental instability that may be permanent."

### ACTIVITIES IN SANITARY INSPECTIONS

During the month of November, the Division of Sanitation of the State Department of Public Health made preliminary sanitary surveys of five California cities. These surveys cover the inspection of facilities for the disposal of sewage and garbage, as well as the inspection of all food dispensing places, such as bakeries, meat markets, creameries, dairies and food manufacturing plants. A total of 103 miscellaneous complaints were investigated during the month and 11 special investigations concerning the control of rabies in dogs, sanitation on Indian reservations, and miscellaneous sewage disposal nuisances, were made. In addition to these special investigations, 30 inspections covering the collection of garbage and garbage disposal were carried on by the division during the month.

### HIGH MORTALITY RATES AMONG MEXICANS

In 1928, 66,249 residents of California died. Of these, 6362, almost 10 per cent, were Mexicans; 1283 were negroes; 808 were Japanese; 725 were Chinese; 346 were Indians; and 56,431 were whites. Out of 6074 deaths from tuberculosis, 1351, more than 22 per cent, were among Mexicans. Out of 4466 deaths from pneumonia, 903, almost 20 per cent, were among Mexicans. Among deaths from diseases which occur commonly among children, there were 336 from whooping cough, of which number 190, 56 per cent, were among Mexican children. Out of 818 deaths from enteritis among children under two years of age, 569, almost 70 per cent, were among Mexican infants. The numbers of deaths from the degenerative diseases of adult life were relatively few among Mexicans. Presumably, the Mexican in California dies before he reaches the age when the common degenerative diseases generally develop. Tuberculosis causes about one-sixth of all deaths among negroes in California, about one-sixth of all deaths among the Chinese, one-fifth of all deaths among the Japanese and about one-tenth of all deaths among persons of all other races. This analysis of deaths among certain foreign-born residents of California indicates that comparatively high death rates prevail among the Mexicans, much higher, in fact, than among individuals of other races.

### RODENT SURVEY ACTIVITIES

The State Department of Public Health is active in determining the presence of infected rats and ground squirrels throughout California. During the past two years, the Division of Sanitation has collected 31,513 ground squirrels and 27,646 rats, upon all of which post-mortem examinations were made. Most of these examinations were carried on in the field, only such animals as showed gross signs of infection being shipped to the laboratory for microscopical examination. These surveys have covered 19 counties, and in addition, rodent control work has been carried on, under the supervision of the State Department of Public Health, during the past two years, in 42 cities and towns scattered throughout California.

#### RODENT SURVEY ACTIVITIES

##### Two years, 1928-1929

Numbers of counties in which surveys were made.....	19
Numbers of ground squirrels collected.....	31,513
Numbers of rats collected.....	27,646
Numbers of post-mortem examinations.....	59,159
Numbers of cities and towns in which rodent control work was carried on under supervision of State Department of Public Health.....	42

When controversy bursts forth, the first one to become silent is assuredly of good family.—*Talmud*.



**DYSENTERY IN STATE INSTITUTIONS**

Early in December, the Napa State Hospital requested assistance in the investigation of an outbreak of dysentery and diarrhea among the patients in the institution. It was found that cases had been developing since early in August, as follows:

August -----	5 cases with	0 deaths
September -----	21 cases with	5 deaths
October -----	29 cases with	1 death
November -----	47 cases with	4 deaths
December to date -----	7 cases with	1 death
Totals -----	109 cases	11 deaths

It was impossible to obtain the dates of onset for 26 cases. These 135 cases, with 11 deaths, were scattered over 40 wards; 55 of the cases were in men and 80 in women. Four of the hospital attendants were affected. Sixty-three received treatment in the infirmary.

The investigation is still under way. Bacillary dysentery presents many difficulties to the investigator. First of all, the laboratory must be near the patient because the organism does not live long outside the body; also, the specimens to be submitted to the laboratory must be obtained early in the course of the disease in order that the organism may be isolated and the diagnosis made. The Flexner type of bacillary dysentery was isolated from three of the patients who were taken ill since the investigation started. To date, the exact source of infection has not been located. Cases scattered over such a long period of time, and among the men and women in so many wards, suggest a carrier borne infection through the agency of food. A food handlers' survey is now being conducted in the attempt to locate the source.

The extent of bacillary dysentery in institutions in this state indicates that some special work should be undertaken to locate the sources, prevent the infections, and to eliminate the added expense of caring for large numbers of inmates who may be ill at one time. During July, 551 cases were reported from San Quentin. Laboratory investigations proved that epidemic to be due to the Flexner strain. It has been reported that cases of dysentery have recently occurred at Talmage and that the outbreaks have been appearing each year.

Even in the populous districts, the practice of medicine is a lonely road which winds uphill all the way, and a man may easily go astray and never reach the Delectable Mountains unless he early finds those shepherd guides of whom Bunyan tells, Knowledge, Experience, Watchful and Sincere.—Osler.

**MORE MARRIAGES IN 1929**

During the first ten months of 1929, 43,454 marriages were performed in California as against 39,359 marriages performed during the first ten months of 1928. This represents a gain of more than four thousand marriages during the first ten months of the present year. This would indicate that the lower marriage rate that prevailed following new legislation pertaining to marriage licenses, enacted in 1927, has been overcome in part. The marriage rate for 1928, 10.8 per thousand population, was the lowest that has ever been recorded in California. There is every indication that the marriage rate for 1929 will be higher than that for 1928, but it probably will not be as high as that which prevailed before the legislation of 1927 was enacted. Following are the number of marriages and the marriage rates, by years, for 1920 to 1928:

1920 -----	46,564	13.4
1921 -----	46,972	13.1
1922 -----	47,477	12.8
1923 -----	55,190	14.5
1924 -----	55,677	14.2
1925 -----	55,081	13.7
1926 -----	56,664	13.7
1927 -----	53,487	12.6
1928 -----	46,945	10.8

**DRUG STORE INSPECTION**

During the last few weeks, the Bureau of Foods and Drugs has carried on an intensive survey of drug stores throughout the state in an effort to remove from the market mislabeled drugs and patent medicines, the labels of which indicate that they are useful in the prevention or treatment of influenza, la grippe, pneumonia and related diseases. It is conceded that there is no known drug or combination of drugs which will prevent or cure influenza. In accordance with the regulations of the United States Department of Agriculture, products labeled as effective for this purpose will unhesitatingly be classed as misbranded within the meaning of the California Drugs Act and will be treated accordingly. In the survey now under way, the proprietors of drug stores have willingly cooperated with the bureau in making the labels of all such products conform to the requirements of the law.

**MORBIDITY\*****Diphtheria.**

68 cases of diphtheria have been reported, as follows: Oakland 3, Calexico 1, El Centro 2, Kern County 1, Los Angeles County 11, Alhambra 2, Glendale 3, Long Beach 4, Los Angeles 13, San Gabriel 1, Santa Monica 1, Madera County 2, Merced 1, Napa 2, Orange County 1, Orange 7, San Bernardino County 1, San Bernardino 1, San Francisco 7, Tehama County 1, Tuolumne County 2, Sonora 1.

\* From reports received on December 16th and 17, for week ending December 14th.



**Scarlet Fever.**

382 cases of scarlet fever have been reported, as follows: Alameda County 4, Alameda 1, Albany 11, Berkeley 4, Oakland 35, San Leandro 1, El Dorado County 4, Fresno County 10, Fresno 14, Reedley 5, Willows 3, Humboldt County 3, Eureka 1, Kern County 4, Bakersfield 4, Los Angeles County 15, Alhambra 2, Culver City 4, Glendale 3, Inglewood 4, Long Beach 4, Los Angeles 64, Pasadena 3, San Fernando 1, San Gabriel 2, Santa Monica 1, South Gate 2, Maywood 4, Madera County 3, Madera 3, Chowchilla 1, Marin County 1, San Rafael 1, Ukiah 1, Merced County 2, Los Banos 2, Merced 1, Monterey County 4, Pacific Grove 2, Salinas 7, Orange County 3, Fullerton 1, Huntington Beach 1, Seal Beach 1, Plumas County 2, Riverside 1, Sacramento County 2, Sacramento 11, San Bernardino County 9, Redlands 1, San Diego County 4, Escondido 7, National City 3, Oceanside 1, San Diego 6, San Francisco 43, San Joaquin County 1, Lodi 2, Manteca 4, Stockton 6, Daly City 1, San Mateo 2, Menlo Park 1, Santa Clara County 2, Palo Alto 1, San Jose 2, Mount Shasta 5, Vallejo 1, Sonoma County 2, Stanislaus County 3, Modesto 2, Turlock 2, Red Bluff 5, Tulare County 2, Woodland 1.

**Measles.**

315 cases of measles have been reported, as follows: Alameda County 2, Alameda 2, Oakland 6, Contra Costa County 3, Los Angeles County 8, Inglewood 1, Long Beach 1, Los Angeles 5, Gustine 2, Santa Ana 1, La Habra 1, Sacramento County 30, Sacramento 1, San Bernardino County 1, San Bernardino 1, National City 1, San Francisco 184, San Joaquin County 38, Lodi 2, Tracy 1, Paso Robles 1, Daly City 2, San Jose 16, Sutter County 4, Visalia 1.

**Smallpox.**

56 cases of smallpox have been reported, as follows: Alameda 1, Berkeley 1, El Centro 2, Hanford 1, Los Angeles 1, Pomona 2, Maywood 6, Salinas 5, Orange County 1, Roseville 1, Riverside County 1, Sacramento 2, San Bernardino County 1, San

Francisco 5, San Luis Obispo County 2, Arroyo Grande 1, Stanislaus County 20, Modesto 1, Tuolumne County 1, California 1.\*\*

**Typhoid Fever.**

3 cases of typhoid fever have been reported, as follows: Sacramento County 1, Sonoma County 2.

**Whooping Cough.**

105 cases of whooping cough have been reported, as follows: Alameda 2, Albany 2, Berkeley 8, Oakland 2, Los Angeles County 19, El Monte 1, Los Angeles 16, Pasadena 2, Pomona 1, San Fernando 1, Orange County 6, Fullerton 4, Huntington Beach 3, Newport Beach 1, Santa Ana 11, Sacramento 1, San Diego 13, San Francisco 6, Stockton 5, San Jose 1.

**Meningitis (Epidemic).**

18 cases of epidemic meningitis have been reported, as follows: Oakland 3, Long Beach 1, Los Angeles 3, Santa Monica 1, Torrance 1, Monterey 1, Riverside County 1, Sacramento County 1, Sacramento 1, San Diego 1, San Francisco 3, Solano County 1.

**Leprosy.**

Madera reported one case of leprosy.

**Poliomyelitis.**

Santa Clara County reported one case of poliomyelitis.

**Undulant Fever.**

San Marino reported one case of undulant fever.

**Tularemia.**

Kern County reported one case of tularemia.

\*\* Cases charged to "California" represent patients ill before entering the state or those who contracted their illness traveling about the state throughout the incubation period of the disease. These cases are not chargeable to any one locality.

## COMMUNICABLE DISEASE REPORTS

Disease	1929				1928			
	Week ending			Reports for week ending Dec. 14 received by Dec. 17	Week ending			Reports for week ending Dec. 15 received by Dec. 18
	Nov. 23	Nov. 30	Dec. 7		Nov. 24	Dec. 1	Dec. 8	
Actinomycosis.....	0	0	0	0	0	1	0	0
Botulism.....	0	0	0	0	0	0	1	0
Chickenpox.....	311	294	416	445	253	237	237	216
Coccidioid Granuloma.....	5	2	2	0	0	2	0	1
Dengue.....	0	0	0	6	0	0	0	0
Diphtheria.....	109	79	102	68	124	77	93	76
Dysentery (Amoebic).....	1	1	0	0	2	1	1	0
Dysentery (Bacillary).....	3	2	0	0	0	2	0	2
Encephalitis (Epidemic).....	1	1	1	0	1	7	3	1
Erysipelas.....	20	15	15	20	11	17	10	12
Food Poisoning.....	6	0	29	0	1	4	0	0
German Measles.....	11	7	11	6	3	5	7	13
Gonococcus Infection.....	129	114	135	123	101	113	105	115
Hookworm.....	0	0	1	0	0	1	1	0
Influenza.....	40	67	77	84	5,155	10,102	10,704	6,665
Jaundice (Epidemic).....	0	1	0	0	0	0	1	0
Leprosy.....	4	0	1	1	0	0	2	0
Malaria.....	3	0	2	1	2	0	1	1
Measles.....	136	133	192	315	20	29	21	14
Meningitis (Epidemic).....	10	7	9	18	12	9	9	19
Mumps.....	363	296	408	415	212	152	203	192
Ophthalmia Neonatorum.....	0	0	1	0	0	0	1	0
Pellagra.....	0	0	0	1	0	0	0	0
Pneumonia (Lobar).....	57	90	95	118	121	253	192	193
Poliomyelitis.....	3	2	3	1	6	7	0	3
Rabies (Animal).....	20	13	16	10	16	20	13	5
Scarlet Fever.....	290	344	363	382	191	192	199	179
Smallpox.....	67	40	40	56	28	18	21	24
Syphilis.....	132	121	149	117	148	115	149	169
Tetanus.....	1	1	2	1	0	3	0	0
Trachoma.....	2	3	1	2	1	4	3	0
Trichinosis.....	0	0	0	0	0	1	2	0
Tularemia.....	1	2	0	1	0	0	0	0
Tuberculosis.....	154	184	187	169	232	207	205	175
Typhoid Fever.....	12	5	8	3	5	6	4	4
Undulant Fever.....	2	0	0	1	0	0	0	0
Whooping Cough.....	125	84	101	105	129	121	150	133
Totals.....	2,018	1,908	2,367	2,463	6,774	11,706	12,338	8,212

**Epidemic meningitis is too high.**

1 1 1

**Watch influenza.**

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**Measles jumped to 315 cases reported last week.**

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**Chickenpox, mumps and scarlet fever show further increases.**

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**Smallpox is on the increase.**